



Jefferson Lab Alignment Group Data Transmittal

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DATE : Oct 27, 2003

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Checked:

A905

DETAILS:

Below are the results from the May 23, 2003 post run survey performed on the target collimator blocks. During the experiment, the original blocks were replaced with a new set, which were not fiducialized or surveyed prior to the run. During the post run survey, the new blocks were re-positioned on the support plate after the target cell was surveyed. These results are labeled below as "measured in place".

The locating pins which position the blocks were so badly deteriorated, it was unclear whether the blocks were replaced in the correct location. It was then decided to survey the fiducial balls on the support plates, and use them to determine the position of the blocks after the locating pins were repaired. These results are also shown below ("derived").

Note that the upstream block has a small spacer placed in the channel, which rides on the locating pins. During the fiducialization, the spacer was thought to be debris and was taken out. After becoming aware of its function, it was then replaced for the fiducialization. Also note that the large differences on the downstream block indicate the problems incurred with positioning the blocks on the deteriorated pins.

The coordinate system is relative to the ideal target center in millimeters. A positive X is to the beam left, and a positive Z is downstream.

| | X | Z |
|------------------------------------|--------|--------|
| BRI6U downstream beam left corner. | | |
| Measured in place. | -27.02 | 219.86 |
| Derived from fiducial data. | -27.19 | 219.72 |
| BRI6D upstream beam right corner. | | |
| Measured in place. | -20.64 | 342.74 |
| Derived from fiducial data. | -28.52 | 339.55 |